



2012 JUN 13 PM 4:09

Certified Mail Return Receipt Requested: 7002 0460-0003 1936 4072 ...

**Sunoco, Inc.**  
3144 Passyunk Avenue  
Philadelphia, PA 19145-5299  
215 339 2000

June 12, 2012

Mr. Edward Wiener  
Chief, Source Registration  
Air Management Services  
321 University Avenue  
Philadelphia, PA 19104

RE: Request for Alternative Compliance Method under 40 CFR 60.106(i)(12)

Dear Mr. Wiener:

The Sunoco, Inc. (R&M) Philadelphia Refinery is requesting to use an alternative method for determining compliance with 40 CFR 60.104(b)(2) under 40 CFR 60.106(i)(12).

Without the use of an add-on control device to reduce SO<sub>2</sub> emission, maintain sulfur oxides emissions calculated as SO<sub>2</sub> to the atmosphere less than or equal to 9.8 kg/Mg (20 lb/ton) coke burn-off;

In 2006, Third Party contractors conducted stack testing for Ammonia and Oxides of Sulfur at 868 FCCU. Seven stack tests were completed during the time period of March through June of 2006. All of these results were submitted to Air Management Services on March 28, 2007. During these tests a total of twenty-two (22) runs were completed. The Oxides of Sulfur were determined based on SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub>. As part of this current request, using the ratio of the molecular weights, the H<sub>2</sub>SO<sub>4</sub> was expressed as SO<sub>2</sub> and then added to the SO<sub>2</sub> stack test result to obtain the total sulfur oxides. The ratio of these results was then used to determine a multiplier to calculate the total sulfur oxides calculated as SO<sub>2</sub> emissions. The average of the ratio of sulfur oxides to SO<sub>2</sub> is 1.08. The testing results on May 16, 2006 at 12:36 were excluded from this average as they appear suspect. The 868 FCCU is equipped with a 40 CFR Part 60 certified Sulfur Dioxide (SO<sub>2</sub>) Continuous Emissions Monitor. The calculated factor would then be used as a ratio to obtain sulfur oxides emissions from the SO<sub>2</sub> CEM. Using this ratio and the CEM measured SO<sub>2</sub>, the maximum CEM measured SO<sub>2</sub> emissions would be limited to 9.1 (9.8/1.08) kg/MG coke burn-off. Using the continuously monitored coke burn off rate, these sulfur oxide emissions as SO<sub>2</sub> and equation in 40 CFR Part 60.106(b)(3) compliance can be tracked and documented. Please see attached calculations.

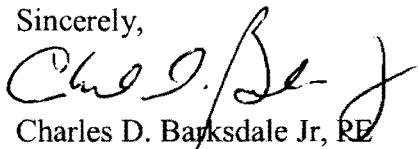
June 12, 2012

Mr. Edward Wiener  
Chief, Source Registration  
Air Management Services  
321 University Avenue  
Philadelphia, PA 19104

Sunoco respectfully proposes to comply with 40 CFR 60.104(b)(2) using the certified SO<sub>2</sub> CEM and the ratio of Total Sulfur Oxides to SO<sub>2</sub> and calculate the daily Total Sulfur Oxides emission rate. There have been no major process changes at the FCCU since this test was conducted that would affect the emissions ratio.

Should you have any questions or comments in reference to this matter, please contact me at 215-339-2074.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles D. Barksdale Jr.", with a stylized flourish at the end.

Charles D. Barksdale Jr, RE  
Environmental Manager

Enclosures (1)  
CDB/pm



